

May 5, 2004

MODIS sensor Working Group (MsWG) Summary

Attendance: Bill Barnes, Stuart Biggar, Vincent Chiang, Gene Eplee, Bob Evans, Gerhard Meister, Chris Moeller, Vince Salomonson, Junqiang Sun, Gary Toller, Jack Xiong, Zhengming Wan, Joe Esposito

Scheduled Items

Item 1 LUT delivery

Regular Terra m1 update for V4.3.0.7 was made on May 3rd following a delay due to power outage at GSFC.

Item 2 Terra SRCA 10W lamp #2 (B) issue: 20W SRCA response is not working properly

JX) The behavior of the four 10W lamps, A through D, have been measured. Note that: 10W=A; 20W=B+C; 30W=A+B+C. Lamp B is out of family. We will recommend replacing the B lamp with D.

VS) How did you identify the bad lamp?

JX) Looked at current and noise. B is noisier and is at higher current which causes the lowered response.

SB) How are the lamps controlled?

JX) Control is run at constant radiance.

SB) This implies that the control is not working for B. The higher current may mean that the lamp filaments are shorting.

JX) If Roger (SBRS) okays this change then we will have MODIOT change the commands to use D instead of B.

Item 3 Terra TEB Band 28, D10 (product order)

JX) Detector 10 noisy and unstable after day 118 GMT 13:10 (Apr 27). Traced back to have started occurring after passing over the SAA. The impact to the SWIR bands may not be large.

WB) Is there another sender band that can be used.

CM) Possibly band 25.

JX) We can flag the detector as noisy in the next LUT delivery.

Around the Table

Participant: Vince Salomonson

VS) Is there any problem(s) caused by the AURA launch.

JX) No, the ± 8 hours of no TDRS contact should not cause a problem.

VS) The contact loss is probably shorter than ± 8 hours.

What is the status of the MISR/MODIS issue?

JX) It was first thought to be all bands (RGB) but now it seem to be only the red bands.

WB) Are you tracking the land to ocean ratio for each (1-2%) ?

SB) MISR needs to be careful about how the dark response is done.

The data is 14 bit, they take the square root then pad, unpad and reduce to 12 bits. Dn channels can be lost. Also, their circuits are prone to errors. If MODIS is ok then MISR must be looked at closely.

JX) We have scheduled a meeting with the MISR team for next Wednesday.

Participant: Bob Evans

JX) Issues raised by Bob. When you got the new data is it from the DAAC or processed with the smoothed m1 we sent to you?

BE) We used smoothed m1 delivered by MCST. There is a 1-2% LT change between Dec 2003 and Jan 2004.

VC) The image that you sent is near the end of 2003 (December) which is at the end of the m1 range. Smoothing may be causing the problem (the m1 is extrapolated to 2004).

JX) But the problem continues farther into 2004.

VC) Visually I don't see a problem in the image from the granules I ordered from the DAAC. I will look more closely at your granules.

BE) Some of the detectors are low and some are high, changing in mid December to January. Center detectors become higher than the end detectors.

JS) (RVS) Bob quotes an error of 0.6% which is near the limit we can get at present for the RVS.

JX) Since your data implies raising the SRCA (center), is this equivalent to lowering the ends?

BE) Center is low and the edges are higher. We must increase the corrections with time which may imply that the m1's may be a little low. We can look into taking the m1's as being low but this may cause the SRCA to become too low.

Participant: Gerhard Meister

GM) We have been looking at the polarization and see a 4 cycle effect where we expect a 2 cycle effect. This implies that we cannot get at the 2 cycle effect

JS) Fitting should average out the 4 cycle effect.

JX) Then this implies the polarization analysis is ongoing.

Participant: Stuart Biggar

SB) We are planning a field trip for June/July to get ASTER/MODIS over flights. The laboratory work is ongoing

Participant: Chris Moeller

CM) Using ER2 data for MODIS/ASTER comparison

JX) Can you look to see if any Terra SWIR bands change is visible due to B28 detector 10 problem.

CM) Will do.

Participant: Zhengming Wan

ZW) Field campaign end of May/June to north Texas grasslands.

Next MsWG meeting May 19, 2004